State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-9-11

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

MITSUBISHI MOTORS CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 of the Health and Safety Code; and,

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following Mitsubishi Motors Corporation 1999 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Loader, Generator, Crane

Fuel Type: Diesel

Engine Family	Liters (Cubic Inches)	Exhaust Emission Control Systems and Special Features
XMTXL11.9D6A	11.9 (729)	Turbocharger

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

Exhaust Emissions (g/bhp-hp)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
0.2	0.5	5.7	0.2	16	3	39

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2425 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 17th day of February 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

12/16/97

LARGE ENGINE MODEL SUMMARY

EO: U-R-9-11

Manufacturer: Mitsubishi Motors Corporation

Process Code: New Submission

EPA Engine Family: XMTXL11.9D6A

Manufacturer Family Name: N/A

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
6D24TEC-US99	6D24-TEC	280 @ 1800	156	93.6	856 @ 1600	172	91.8	EM,TC
6D24TEA-US99	6D24-TEA	240 @ 1650	156	85.8	777 @ 1400	153	71.4	EM,TC
6D24TEB-US99	6D24-TEB	263 @ 2000	152	101.4	746 @ 1400	150	70.0	EM,TC
6D24TED-US99	6D24-TED	248 @ 1700	146	82.7	788 @ 1400	156	72.8	EM,TC
6D24TEE-US99	6D24-TEE	283 @ 2200	156	114.4	810 @ 1400	162	75.6	EM,TC